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Governor

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Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil Gas and Mining

JOHN R. BAZA
Division Director

August 6, 2007

Holcim (U.S.), Inc
Tom Newman
6055 East Croydon Road
Morgan, Utah 84050

Subject: Third Review of Revised Notice of Intention to Commence Large Mining Operations, Holcim (U.S.) Inc., Devils Slide Quarry, M/029/001, Task ID# 1543, Morgan County, Utah

Dear Newman:

The Division has completed a review of your response for the Devils Slide Quarry, received May 10, 2007. After reviewing the information, the Division has the following comments which need to be addressed before tentative approval may be granted.

The comments are listed below under the applicable Minerals Rule heading. Please address only those items requested in the attached technical review. Send replacement pages of the original notice **using redline and strikeout text** and indicate how these are to be incorporated into the current approved plan using Form-MR-REV-att found on the Divisions web page. After the notice is determined technically complete you will be asked that you send us two clean copies and one electronic copy of the complete; one copy will be returned.

It is suggested that your response also combine the original permit and all approved or proposed amendments/revisions into one, comprehensive mine plan. This would reduce confusion in our reviews (example, is appendix 3 in the original permit or one of the revisions), thus expediting this review as well as future amendments/revisions.

The Division requests that submittals are made according to the following format. Notices and changes should be three hole punched, maps folded and placed in a plastic 8 ½ by 11 sleeve, and binders provided for new notices, revisions, applications, or other changes of 30 pages or more (binders need only be provided once). Applications should not be bound.

1594 West North Temple, Suite 1210, PO Box 145801, Salt Lake City, UT 84114-5801
telephone (801) 538-5340 • facsimile (801) 359-3940 • TTY (801) 538-7458 • *www.ogm utah.gov*

UTAH DNR OIL, GAS & MINING

If you have any questions in this regard please contact me at (801) 538-5258 or Lynn Kunzler at 538-5310. If you wish to discuss this review, please contact us at your earliest convenience. Thank you for your cooperation in completing this permitting action. In reply, please refer to file # M/029/001.

Sincerely,

Susan M. White
Mining Program Coordinator
Minerals Regulatory Program

SMW:lk:pb
Attachment. Review, Form MR-REV-att
P:\GROUPS\MINERALS\WP\M029-Morgan\M0290001-DevilsSlide\final\07312007-ThirdRev.doc

THIRD REVIEW OF NOTICE OF INTENTION TO COMMENCE LARGE MINING OPERATIONS

Holcim (U.S.), Inc.
Devils Slide Quarry

M/029/001
July 31, 2007

General Comments

The introduction states in bullet 4., page 1, a variance request is made allowing for highwall slopes greater than 45°. The Division will not grant this variance without further actions, part of which are stated in the second review dated December 8, 2005, 106.2 . (BE)

Please elaborate and clarify bullet 3, in the Introduction, page 1. It is unclear what the intent of this statement is. Has it been reclaimed? (BE)

The submittal is not signed by an authorized representative of the company. (BE)

When submitting proposed changes for Division review, submit all maps, appendixes, tables etc., please do not reference their location as confidential. 'Confidential', does not mean they can be omitted from the submittal that requires review by Division personnel. Confidential means the information is not a matter of public record. Please note, the Division can only keep the location, nature and extent of the deposit as confidential. Submit the map(s) marked confidential. This comment applies to all missing appendixes, maps, and tables because they are 'confidential'. (BE)

When submitting text and maps, represent the undisturbed areas as though they are disturbed and the Division has granted approval. Using phrases such as 'proposed disturbance' will be unclear into the future when the disturbance has actually occurred. The Division would like current tense usage. (BE)

R647-4-105 - Maps, Drawings & Photographs

105.1 Topographic base map, boundaries, pre-act disturbance

Figure 105.1, revise the legend to reflect what the map represents. Legend representations are unclear when looking at the map. For example, the legend shows the conveyor belt line in red, the map shows an outline in red that does not appear to be a conveyor. (BE)

Figure 105.2 does not show the disturbance leased area as shown on legend in blue. Why? Is there a difference between the disturbance leased area and the Holcim leased

boundary? Explain what the disturbance leased area is. Please describe how sheets 1-4 fit together. Provide township, range and section on each of the sheets. Reference in the text that Figure 105.2 includes sheets 1-4. The text describes the overburden dump area, however it is not shown on the map. Please identify the drainages (i.e. Cottonwood Canyon and Quarry Hollow). (BE)

Surface facilities map
Figure 105.3 shows green lines in the cement silo areas and running parallel to HWY 158, it is unclear what the green lines represent. In the location of the future silos (11), there are light blue lines and according to the legend these are telephone lines. Please explain or correct. Explain what the yellow lines mean. They are located by the blending silo. There is also a yellow circle with a dot in the middle, identify. Where is the plant stripping area? (BE)

Figure 105.4, Facility Map, the legend provides an acreage breakdown, but it is unclear what acreages comprise the 'disturbance area breakdown'. It is assumed it's including the proposed disturbance area, however, the title of 'disturbance area breakdown' could indicate existing disturbance. What do the pink lines represent on the map? The roads are represented by double lined pink, but the other areas in pink are not on the legend. It is shown on the acreage table called 'disturbance area breakdown' but not on the legend or the map. The plant reclamation treatment, village reclamation treatment, and quarry reclamation treatments are shown in red, blue, and green fill on the legend, but no indication of where they are on the map. The text mentions the Village Area, however, it is unclear where it is located on the map. Are there no roads connecting the various areas? Roads are shown in the plant general area, but nowhere else. Is this an accurate representation? Show where the stockpile area(s) are located. There is a reference to a well in the text 106.6 that is supposed to be located on figure 105.4, it is not shown, or if it is, it isn't on the legend. Provide the location and size of the Overburden Dump Area. Provide location and size of Bone Yard Hollow. Provide location of the new kiln dust stockpile area and its size. Lastly, the title of the map, facility map, is misleading as the map itself includes a larger area. (BE)

Dirt Road AA – Dirt Road KK should be shown on a map. (BE)

105.3 Drawings or Cross Sections (slopes, roads, pads, etc.)
The baseline geology map needs to show the permit and quarry features. (BE)

Show where the quarry that is no longer in use is located on a map. How many acres is the quarry? Also show the location of the 'small' quarry on the map, and its size in acres. (BE)

Figure 105.5 should be submitted to the Division. Based on the text content, there is indication that that slopes may remain steeper than 45°, however, a variance is required in this case. If these referenced highwalls occur during active mining only, then please rephrase the sentence to indicate that all slopes will be reclaimed and stabilized by

backfilling against them or by cutting the wall back to achieve a slope of 45° or less. Because the title of the map is FINAL QUARRY MINE PLAN, it is assumed this map is the reclamation map. Therefore, it is assumed that slopes will be steeper than 45° and highwalls remain. The text references slopes proposed to be steeper than 3h:1v, provide the angle this refers to, as this ratio falls within the Division rules. Clarify the text; …highwalls are temporary and active parts of the mining process. Does that mean they will be reclaimed and stabilized to 45° or less? (BE)

A reclamation treatments map should be included that demonstrates the reclamation work to be performed upon completion of mining operations. This map should be detailed and identify where the various reclamation treatments will be performed, including, but not limited to: topsoil replacement (and depth); areas that will not have topsoil replaced, but where soil materials will be amended to make a suitable plant growth medium; areas where different seed mixes or seeding methods will be used; areas for which variances to reclamation treatments are requested/approved; roads to remain to facilitate post-mining land uses; etc. (BE & LK)

Provide a map that shows the current disturbance and proposed future disturbance. (BE)

R647-4-106 - Operation Plan

General comments:

As an overview, the Division expects an ultimate pit mine plan, general production sequence, pit slope design sectors and geotechnical basis, geologic map with major structures, joint sets, bedding etc., pit dimensions (i.e. width, length, depth), plan of pit roads, dump points, stockpiles etc. (BE)

106.2 Type of operations conducted, mining method, processing etc.

The mining operation does not include any information about how the site is prepared to minimize environmental impact. How will roads be managed? Are berms being used? How is sediment managed? Water? Explain why the comment starting with 'under the proposed mine plan…' was deleted. Where is APPENDIX 1? (BE)

106.3 Estimated acreages disturbed, reclaimed, annually.

Where is the small quarry within table 106.1? Where are the stockpile(s) within table 106.1? Break down the acres for each of the quarries, 1,2, and 3. Describe what areas are in the village. Where is the village on figure 105.4? It is difficult to follow past and present tenses in the text. For example, the text indicates 184.5 acres will be disturbed for the overburden dump area but the table is titled, Summary of the Estimated Acreage Disturbed, implies the area is already disturbed. Instead of referencing the existing disturbance for the village and the plant facilities, create table 106.1 to include current disturbance and future disturbance (if that is the case). The words 'future disturbance' indicated an area that is unbonded? If so, a mine plan amendment will be submitted prior to disturbance. Show in a table within what area the future disturbances will occur and the

acreages associated with each area. There is no statement indicating there aren't deleterious materials left on site or present in the area. Due to the nature of the operations there may be some of these materials present, if so, they should be identified in table form. (BE)

106.4 Nature of materials mined, waste and estimated tonnages
There is no indication of the kiln dust volumes. Please provide. (BE)

106.5 Existing soil types, location, amount
Please provide an estimate of the cubic yards of soil that has been stockpiled, as well as the amount that will be stockpiled as mining progresses. Please note, as per the soil analysis, there are suitable soils for salvaging. (lk)

106.6 Plan for protecting & redepositing soils
There have been soils salvaged in the past (waste rock disposal area) and stockpiles do exist on site (as observed during past inspections). Please describe how these stockpiles are protected until topsoil is used for reclamation. (lk)

106.8 Depth to groundwater, extent of overburden, geology
Because the Division replaces pages as changes to the plan occur, the reference to the geology in the 1987 reclamation plan should be specific. Please include the geologic information from the 1987 reclamation plan. There may be additional comments regarding the content of this information, but it must be submitted. There is reference to the well location; however, it is not identified on the referenced map figure 105.4. Provide the depth to groundwater ranges and indicate over the time period these ranges have been determined. Provide a date the last measurement was taken. Provide the elevation of the well. What is the extent of the overburden material? Provide this information. (BE)

106.9 Location & size of ore, waste, tailings, ponds

- Where is the Overburden Dump area? See applicable portions of 105.1. Describe what the interburden material is comprised of.
- The text indicates that dust ***was once*** stockpiled at Barn Yard Hollow, where is the dust now? Where is the new stockpile area for the dust? The text indicates it is in an area that is topographically lower in the valley than the area described in the 1987 plan. What is the elevation of this area and where is it located. It must be shown on an updated map.
- If changes have occurred since 1987, these must be incorporated into a new map that will replace the earlier maps of 1987. Again, continual referencing to the 1987 plan is undesirable. Please be specific and include the information in the submittals or show how this submittal will be incorporated into the existing plan.
- The methods implemented to contain the kiln dust and prevent contamination to the surface and ground water has not changed since 1987? The chemical and toxicity analysis have not been included in the submittal. Please submit for review. Please identify all the drainage channels. The text refers to Quarry

Hollow and Cottonwood Canyon, does that mean these are the only two channels in the entire area?

- The text indicates various Best Management Practices will be used and references some of which will be used in Appendix 3. Where is APPENDIX 3? More specifics need to be included regarding design for each of the downstream control measures. Because such a wide range are offered in APPENDIX 3 (however, unseen), these measures should be ranked and characterized according to a plan. When sediments migrate what is the methodology for selecting and implementing a BMP. What determines the applicability of a certain BMP choice? How is that identified? What resources are on site and how are they managed for implementation of the various BMP's when needed? More detail is needed, which may be in APPENDIX 3, however, it does not appear to have been included. In the disturbed areas what are the specific plans for addressing sedimentation?
- Define the integrity of the existing slopes. Please elaborate and provide further clarification on the sentence, "The quarry strip material in the bone yard and quarry hollow is placed on the natural angle of repose. Where are the materials being placed exactly? As mentioned, the information and plans for the catch basins and emergency dams should be included. (BE)

106.10 Amount of material extracted, moved or proposed to be moved

There are no volumes provided regarding the amount of material extracted, moved or proposed to be moved. (BE)

R647-4-107 - Operation Practices

107.1 Public safety & welfare

107.1.12 *Disposal of trash, scrap, debris*

Identify lengths of time and allowed volumes of hazardous wastes on site before disposing. Please label containers so that wastes are clearly identified. Adopt measures to minimize and prevent accidents. Indicate storage locations of salvageable and hazardous wastes. Please consider recycling of office waste and general trash as it is highly regarded. (BE)

107.1.14 Posting warning signs

Any loose material generated from blasting that might migrate and should be removed immediately. (BE)

107.2 *Drainages to minimize damage*

The operator response to the initial review was that an outside consultant was putting together a drainage control plan for incorporation into the NOI. The response indicates that a drainage control plan is attached to the response as Attachment xxx. Please supply a number for this amendment and also supply the drainage control plan that should have been attached to the latest response. (TM)

107.4 Deleterious material safety stored or removed
Indicate that any materials that are used at the site will be properly disposed of and stored to eliminate or minimize any adverse environmental impacts. Controls should be implemented as necessary. (BE)

107.5 *Suitable soils removed & stored*
Please show locations of topsoil stockpiles on a map. Note, most areas (with exception of the rock outcrop areas) have suitable soils for salvaging (both quality and quantity). Volume estimates need to be provided for salvaging these soil materials and the location any soil stockpiles should be identified on a map. (lk)

R647-4-109 - Impact Assessment

109.3 *Impacts on existing soils resources*
Soil resources are impacted by this mining operation. Please discuss the impacts to soil resources and the steps to mitigate these impacts. (lk)

109.4 *Slope stability, erosion control, air quality, safety*
Air quality permits may be required for certain mine operations, please reference any such permits. Describe in more detail measures that will be taken to minimize or mitigate impacts to slope stability, erosion, public safety and air quality. (BE)

R647-4-110 - Reclamation Plan

General Comment:
The recent submittal (DOGM task number 1822), does not have any information regarding a reclamation plan other than a general reference to Map xxx - topsoils. This comment appears to be draft, and more specific, concrete, concise information must be submitted. A reclamation plan should include detail about stabilizing, reclaiming and restoring the area disturbed by operations. Suggestions are as follows, however, not all inclusive: appropriate maps showing site reclamation, engineering designs for road, pads, trenches, pits, structure removal, slopes etc. Information should be provided regarding the reclamation of roads that including restoring or stabilizing drainage areas. Explanations should be provided about how waste rock will be managed, identify all buildings that will be demolished including the cost of disposal. (BE)

110.2 Roads, highwalls, slopes, drainages, pits, etc., reclaimed
A variance is required to leave highwall(s). Describe what is the aesthetic goal for the slopes and how will it be achieved? How do they blend with the surrounding topography? Evaluate and explain the statement pit slopes will be left steeper than 3h:1v. Since this ratio is within Division requirements, it is unclear what the statement represents. Show regraded slope configurations on a map. Comments should be consistent with the slope/highwall plan. In the removal of the sediment ponds and diversion structures,

explain how the natural drainage will be re established. Show the drains location on the reclamation map. Sampling should occur beyond monitoring. Again, a map and cross sections should be provided to visually establish the pit floor plan. In the text, there is mention of highwalls again, but no variance has been granted. Roads left remaining during and after reclamation will require maintenance to minimize erosion. No blocking or restrictions that impede drainage or adversely affects the road should occur. Describe the equipment that will be used in this area to handle the reclamation final configuration. (BE)

110.1 Description of facilities to be left (post mining use)
The statement is made that no surface facilities to be left on the Overburden Dump Area, but it is unclear where this area is located and what is consists of. Will there be any surface facilities remaining? (BE)

110.2 Description or treatment/disposition of deleterious or acid forming material
There is no reference regarding deleterious materials on site. Please indicate whether or not any will be left on site. If there are any on site, provide a map identifying the location of materials. This information can be provided on the reclamation map. (BE)

110.5 Revegetation planting program
Please provide details regarding seeding methods, timing and soil amendments/fertilizers that will incorporated during final seeding of the disturbed areas. (lk)

R647-4-111 - Reclamation Practices

111.1 *Public safety & welfare*

1.12 *Disposal of trash & debris*
An environmentally responsible waste strategy plan should be developed and implemented. Each site is unique and requires individual characterization, with the treatment of waste and debris being no exception. If waste piles are created, they should remain on site for reasonable duration, and disposed of in an environmentally protective manner. Waste piles, should be placed to avoid environmental impacts. If there are recyclable materials, a separate area for the collection of these materials is suggested. Hazardous waste (i.e. combustible or flammable liquids), should be disposed of properly, and not mixed with the landfill waste. Explosive remnant (i.e. empty containers, paper and fiber packing materials) shall be disposed of according to manufacturer's instructions. Implement good house keeping procedures, which may include training employees to manage waste properly. (BE)

1.14 *Posting warning signs*

It is suggested that warning signs be placed closer to the reclamation work area as well. These signs should be highly visible, easy to read and easily understood. Signs that become faded and worn should be replaced. (BE)

1.15 Constructing berms/fences above highwalls
Place berms, large boulders, or fence above highwall(s) at public access locations and where there are particular hazards in poor weather, unstable ground, and when working close to the crest. The site should be properly protected and safety issues should be adequately addressed. (BE)

111.12 Topsoil redistribution
Please provide details of topsoil redistribution. Include type(s) of equipment to be used, locations of where soils will be replaced (show on reclamation map), and the depth of replacement. (if areas will receive different depths, show these areas as well on the reclamation map. (lk)

R647-4-112 – Variance

The requested highwall variance will not be granted until further information is provided to the Division. Basic geology information, including a geologic map is necessary. In addition, it is suggested that further study and evaluation should include: a study of stability variables such as geologic discontinuities, shear strength, influence of groundwater, and investigate the influence and susceptibility of various failure modes. Identify how the mine and reclamation plan affects stability. (BE)

R647-4-113 – Surety

General Comment:
The below comments are not considered all inclusive, only a general indicator based on the submitted information. Because the information is limited, the comments below can only be a direct result of that submittal. (BE)

There are several roads identified as Dirt Road AA – Dirt Road KK, please identify these roads on a map. All roads must be included in the surety estimate. At the time of reclamation the Division will consider a variance for any roads with a post mining land use. (BE)

Please ensure all the buildings, facilities, etc. that are identified on the Surety Estimate 2004, are shown and labeled on a map. (BE)

Please provide an electronic version of the surety estimate, as some of the words and headings are truncated, making it difficult to understand. (BE)

Provide clarification regarding the scrapout and recycle. The Division does not typically allow a salvage value, therefore, further explanation is necessary. (BE)

There are components of the surety estimate that are not clarified. For example, what is included in the plant area, leased area, and mine area? Please be specific. (BE)

A written overview of the building demolition is required for clarification. Identify the debris, the location of the landfill in miles etc. Where are the costs of disposal? What are the assumptions? What are the building dimensions? Volumes? (BE)

A list of equipment used should be included with mobilization and demobilization costs. (BE)

There should be costs included for facilities and controls, any items that will ensure safe execution of the project. (BE)

There are no costs included for infrastructure removal such as water wells, septic systems, fencing removal, etc. (BE)

Where is the cost associated with placing the two feet of overburden in the quarry area? (BE)

There are no costs for backfilling or grading/ripping the facilities as described on pages 1-18 of the surety estimate. (BE)

There are no costs shown for sediment control of the facilities as described on pages 1-18 of the surety estimate. (BE)

On page 18 of surety estimate, the line item for revegetation shows 65 acres. This needs to be increased to include all areas that will be revegetated. (BE)

Indirect costs should include a 10% contingency and a reclamation management fee of 10%. (BE)